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SYPHILITIC DISEASES OF THE EYE*

By P. G. DOYNE, F.R.C.S.

I SHOULD like, firstly, to express my appreciation of being asked to take part in this discussion.

I think perhaps the most useful contribution which I can make to this discussion is to give my own personal clinical experience of syphilitic eye diseases.

Starting, then, with the lids and conjunctiva, a primary sore of the lid margin is very occasionally seen. I can only remember to have recognised one such case. There was a small superficial ulcer situated just on the palpebral conjunctiva on the lower lid near the outer canthus. There was a marked degree of surrounding induration, and the preauricular gland of that side (left) was enlarged. This is quite in accordance with the text-book description, but I remember the condition was very like a subacute infection of a meibomian gland.

Gummatous tarsites is also occasionally seen. There is widespread thickening of the whole of the affected lid. I do not think this condition is at all common. I can only call to mind two or three cases.

THE CORNEA

Interstitial keratitis is perhaps the most important and striking manifestation of syphilis in the eyes. In its most typical form it occurs in children, the subjects of congenital syphilis; the most favoured age period being between five and ten years. One eye is affected first, and the fellow eye follows from three to four weeks after. In an average case the duration of the process in each eye is about six weeks.

Clinically, the disease starts as a punctate haze, which spreads over the cornea, usually from above downwards, and is followed by a vascular invasion, which produces the "salmon patch." The whole process is intra-corneal.

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There is no surface ulceration. Clearing takes place from the periphery of the cornea, so that vision is affected until the last. There is always some associated iritis.

Delayed interstitial keratitis in patients over thirty occasionally occurs, and is often rather atypical, and frequently unilateral. Interstitial keratitis in acquired syphilis is not common, and often runs an atypical course.

The association of interstitial keratitis with injury is interesting. It is very common to get a history of injury from a patient who is starting interstitial keratitis. Such statements, however, can be taken with reserve. But frequently there is no question about the injury; interstitial keratitis has started after a corneal abrasion, after a corneal foreign body, and also after operations such as Needlings for congenital cataract, and advancement and tenotomies for squints.

The severity of the injury, however, is of no significance in this connection. Interstitial keratitis may be initiated apparently just as easily by trivial as by severe injuries. Again, there are many cases reported in whom several operations have been performed without producing an attack of interstitial keratitis, but in whom subsequently, years later, interstitial keratitis has occurred.

There is, according to Holmes Spicer, no case recorded in which interstitial keratitis has started first in the fellow eye to the one injured, and one would expect such cases to occur if injury were entirely a coincidence. It would appear that, if the process is ready to develop in an eye, injury can supply "the match that lights the fire."

With regard to treatment, I think every ophthalmic surgeon advises, in addition to local treatment to the eye, general treatment, *e.g.*, N.A.B., etc. But most do not, I think, admit that the withholding or otherwise of the general treatment will make all the difference to the eye result.

The crucial point, surely, is the saving of the second eye; and, except possibly in one case, I have never seen the second eye spared, although treatment had been started immediately the first eye became affected.

Many tables of comparative visual results in treated and untreated cases have been made, which show on the whole better vision resulting in the treated cases, but the results are not striking. (By treatment I am here referring to general treatment.) In this connection it may be

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pointed out that the end visual result depends more on the site of the maximum corneal damage than on the actual magnitude of the corneal lesion. If the resulting opacity of the cornea is central, then the greatest damage to vision will result. Furthermore, owing to the irregular astigmatism produced, these cases are often very difficult and wearisome to refract, and the visual results obtained in some measure reflect the perseverance of the examiner. The resulting vision, therefore, is not an absolutely satisfactory indication of the results of treatment.

Finally, in my experience, interstitial keratitis is less frequently met with now than before the war.

THE SCLEROTIC

Episcleritis is a localised inflammation of the superficial scleral lamellar. It appears as a circumscribed nodule in the neighbourhood of the limbus, deep red in colour. A certain number of these cases appear to be syphilitic in nature, the blood test being positive. It is quite impossible to make the diagnosis from the clinical appearance. Gummata of the sclerotic are described. They are said to take the form of multiple nodules of various sizes, situated around the limbus and extending back to the equator. I cannot remember to have seen a case.

IRITIS

Syphilitic iritis appears in the secondary stage of the syphilis. Parsons states that 3 to 4 per cent. of syphilitics get iritis, and that syphilitic iritis accounts for 25 to 30 per cent. of all cases of iritis. One certainly meets the condition fairly frequently, and it is often bilateral. There is nothing very characteristic about the naked-eye appearance, and, apart from the history, serological tests are necessary to clinch the diagnosis. There is rarely any recurrence of an attack.

Gummatous iritis also occurs, but with much less frequency in my experience. Gummatous iritis is characterised by the formation of reddish nodules at the papillary and ciliary borders of the iris. These nodules are multiple. Gummatous iritis also occurs in young infants and babies the subjects of congenital syphilis.

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CYCLITIS

Presumably there is always some associated cyclitis in the iritis cases. Occasionally, however, a pure cyclitis occurs. Cyclitis is characterised by an outpouring of inflammatory matter into the vitreous and postlental space, and occasionally some slight deposit on the back of the cornea ; the eye is white, or there may be a slight ciliary flush. There is great reduction in vision, and the eye may be slightly tender to touch, and may ache. There is nothing from the clinical appearance to mark the syphilitic case. I have one case clearly in mind. The primary infection occurred in December, and the cyclitis started in the following May. There could be no question of the etiology.

CHOROID

Disseminated choroiditis is practically always of syphilitic origin. The ophthalmoscopic picture is characteristic ; at least, the choroido-retinal scars left after the acute phase are. The multiple white circular areas ringed with pigment, most marked in the equatorial zones, are diagnostic of syphilis. This disease may be due to acquired syphilis, or to congenital syphilis. Disseminated choroiditis due to congenital syphilis usually occurs in the first two years of life, at an earlier period, therefore, than the usual onset of interstitial keratitis.

RETINITIS

In disseminated choroiditis the retina is involved secondarily, but the retina is also attacked primarily by the syphilis. The ophthalmoscope appearances are not very characteristic, and many variations are seen. In children, the subjects of congenital syphilis a widespread, fine pigmentation of the retina is seen, associated generally with some pallor of the optic disc. This pigmentation may be so slight that it is hard to distinguish from the normal, or it may be sufficiently prominent to be very similar to that seen in retinitis pigmentation. In adults all grades of retinitis are seen, from the slight pigmentary change at the macula to widespread degeneration with pigment deposition, and associated with this latter there is often almost complete destruction of the

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choriocapillaris, and marked sclerosis of the choroidal and retinal vessels.

On the whole, in my experience, primary syphilitic retinitis is not very common.

OPTIC DISC

It is doubtful if optic neuritis is ever caused by syphilis, except indirectly, as by a basal meningitis, or an intracranial gumma.

Primary optic atrophy is most commonly due to tabes, and so to syphilis, though in some cases the ataxy never develops. Occasionally a unilateral optic atrophy is seen in a patient with a strongly positive Wassermann, and it is possible that the nerve may be implicated in a syphilitic periostitis in the region of the optic foramen.

I have made no mention of the ophthalmoplegias of syphilitic origin, as I feel that these conditions come more within the province of the neurologist. In conclusion, I should be very interested to learn from the members of the society the relative value of the various tests for syphilis.